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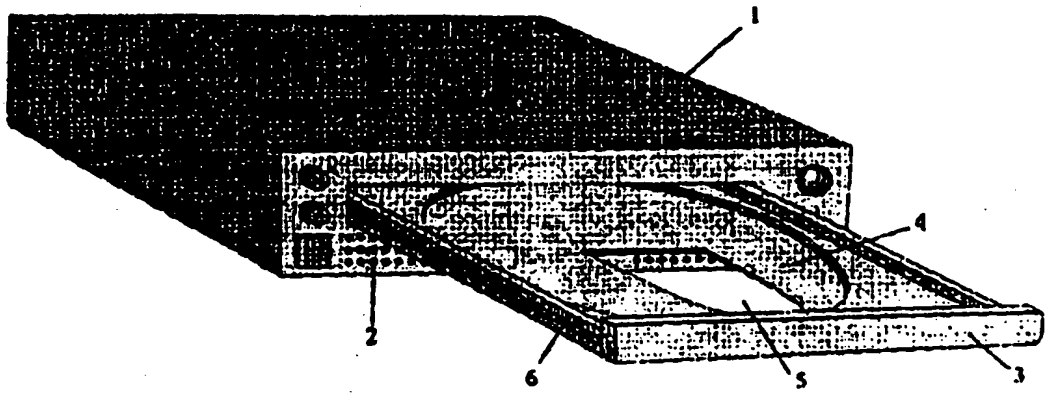
(54) Title: A METHOD AND APPARATUS FOR SCENTING ROOMS IN A PROGRAMMED MANNER



(57) Abstract

The present invention refers to a method and apparatus for scenting rooms in a programmed manner, such as TV rooms, video rooms, CD-ROM rooms, movies theaters, theaters and auditoria for shows. The method of the invention comprises a sequence of fragrances which are exhaled in the room in tune to and in synchronization with an event that is presented, said event being a movie, a stage play, an artistic show and/or a musical, and said sequence of fragrances to be exhaled into the room being produced by means of a carrier of scenting substances or compositi ns and being accomplished timed with the beginning of the event and with the actions, places and movements which are presented along the ev nt. The invention also refers to an apparatus for carrying out the referred method.

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Specification of the Patent of Invention for: A METHOD AND APPARATUS FOR SCENTING ROOMS IN A PROGRAMMED MANNER

FIELD OF THE INVENTION

The present invention refers to a method and apparatus for scenting rooms in a programmed manner.

More specifically, it relates to a method and apparatus for scenting, in a programmed way closed spaces or environments, such as TV rooms, video rooms, CD-ROM rooms, movie theaters, playhouse auditoria and the like.

Even more specifically, the present invention refers to a method and apparatus designed for scenting rooms, associated and synchronized with a video tape, a motion picture, a CD-ROM disk, a theatrical play, or even with the plot of a musical.

BACKGROUND OF THE INVENTION

Methods, apparatus and devices for scenting rooms are much diversified and widely commercialized at present. Thus, for instance, there are aerosol containers for scenting environm nts, d vices for holding sticks or tabl ts intended to scent bathrooms, apparatus designed to be connected to water pipes for flushing toilets and urinals. All thes devic s for dispensing scents into the room provide a wide range of

fragrances such as lavender, wild flowers, tutti-frutti, green apple and others.

In addition to these state of the art elements, some patent documents disclose methods and dispensing devices for scenting rooms, including the release of different fragrances in a pre-determined sequence. An example of such documents is US Patent 5,069,876, published on December 3, 1991, which discloses a display unit for selling products which basically includes an audio unit associated to a scent-dispensing device. Such a unit can also be associated to a photograph display unit. The functioning of such units can be associated in a pre-selected manner. Patent application FR 2,553,666, published on April 26, 1985, teaches an individual, portable device for dispensing perfume fragrances in connection with the presentation of pictures and sound. US Patent 4,603,030, published on July 29, 1986, relates to a system for dispensing a variety of different fragrances in response to a predetermined and programmed sequence of fragrances, with a predetermined duration. Patent application EP 0 295 129, published on December 14, 1988, discloses a method and apparatus for dispensing different fragrances into an environment from different storage containers, in accordance with a predetermined timing controlled by a timer. US Patent 5,342,584, published on August 30, 1994, disclosed a battery-driven device provided with a cartridge impregnated with a fragrance for dispensing at least two different scents. US Patent 5,273,690, published on December 28, 1993, discloses a device employing compressed air together with a carrier charged with a variety of fragrances placed in individual cells. These cells have breakable walls for releasing the scent into the current of compressed air. US Patent 5,178,327, published on January 12, 1993, discloses an apparatus for scenting rooms including a range of different aromas that are selected by means of a rotating cylinder or disk. UK Patent application 2 256 589, published on December 16, 1992, discloses a device for scenting rooms having multipl compartments for different aromas. Patent application UK 2 249 958, published on May 27, 1992, discloses a device for generating aromas, which are selected by a user from a distance.

However, it has not yet been proposed an effective method for scenting rooms that works timed and tuned to the event during its performance. The event in question is, for instance, the presentation of a movie on television, a video cassette tape, a CD-ROM disk, a motion picture in a movie theater, a stage play or an artistic show and/or a musical.

OBJECTIVES OF THE INVENTION

Thus, a first objective of the invention is to provide a method for scenting rooms that is tuned to and synchronized with an event at the time of its performance.

Another object of the present invention is to provide a method for scenting rooms or environments, preferably closed spaces such as rooms for television, video and CD-ROM, movie houses, theaters and playhouse auditoria, the scenting being carried out in tune and synchronization with the motion picture or event while the latter is being presented.

A further objective of the present invention is to provide an apparatus for carrying out the method of the invention.

SUMMARIZED DESCRIPTION OF THE INVENTION

According to one aspect of the present invention, a method is provided by which a room is scented with several different fragrances, in a sequence following specifically th plot of an event, such as a motion picture, a play or a show, the fragrance spreading throughout the room where the event is taking place, so as to provide the audience with the sensation of experiencing that moment or fact together with the protagonist(s) of the event.

According to a second aspect of the present invention, an apparatus is provided for carrying out th aforementioned method, said apparatus including a carrier having several individual compartments containing various fragrances to be dispensed into the room in which the event takes plac .

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention will be better understood with reference to the accompanying drawings, which do not limit th scope of the invention described here and are to be seen only as an illustration of an embodiment of the invention.

- Figure 1 is a perspective view of the apparatus of the invention;

- Figure 2 is a cross-section view of the apparatus of the invention;

- Figure 3 is a top view of the carrier element for the scenting compartments; and

- Figure 4 is a top view of the movie theater equiped with apparatus in accordance with the present invention.

DETAILED DESCRIPTION OF THE INVENTION

According to the present invention, a method is provided for scenting rooms or environments, preferably closed spaces, by which a sequence of fragrances are dispersed into said environment, tuned to and synchronized with an event that is being presented, said event being a motion picture, a play or an artistic show and/or a musical. The sequence of fragrances dispersed into the room will be effected by means of a carrier of scenting substances or compositions, which will be operated tuned to the beginning of the event and in synchronization with the actions, places and movements performed during the event. This feature will p vide the audience with a feeling of greater reality during the various scenes viewed, since the spectators will be able to smell every scent characteristic of the location where the scene takes place.

Scenting substanc s and compositions to be used in th method of the present invention should be either produc d or formulated in accordance with the standards established for this type of product which will be inhaled by p ople. Thus,

they must be non-toxic, anti-allergic, non-irritant and as inert as possible with r spect to the environm nt. The possible number of formulations to be used in the m thod of the present invention can be unlimited, however, it will be appr - ciated that such formulations should include at least those which imitate all the most frequent odours perceived daily in our environment, such as the smell of rain, wet soil, garden flowers, dust, forest, etc. However, fetid odours, if used, should be avoided or at least attenuated. Such odoriferous substances or compositions may be powdered formulations, granules or liquids, and so they must be adequately packed in accordance with their nature. The packages should be individual and should contain defined amounts of scenting substances or compositions, so that they can be easily broken open in the established sequence to supply the scent during a pre-established period of time.

Figures 1, 2 and 3 show an example of an apparatus for carrying out the method of the present invention, which comprises a generally rectangular housing (1), which has several small bores (2) at its front portion, longitudinally disposed along its length and several small bores (7) at its back portion. Above said bores (2) there is a movable receptable (3), provided with a circular recess (4), which has a hollowed-out portion (5). Said movable receptable (3) is provided with side guides (6), so that it can slide upon being opened and closed.

The housing (1) encloses lower (8) and upper (12) compartments, divided by an inclined plate (9) which extends from the back portion (9') of said housing (1) to an intermediate portion (9"), forming a channel in said compartment (8) and a housing for a mechanism (13). This compartment (8) has in its back portion a space where a small fan (11) is installed facing a receptable (10) located at the front portion of said compartment (8) of the housing (1).

Said mechanism (13) is of the type which fits into the central bor (14) of a disk (15) carrying small capsul s of fragrances (16) and is complem nted by a a device that mov s in the vertical direction (17), provid d with a pointed element (18) for perforating said capsules (16) containing

fragrances. For this purpose, said capsules (16) hav to be made from a material suitable to be punctured by said pointed element (18).

The above-described apparatus is electronic and works in response to signals received from the video tap , CD-ROM disk or a pre-established software, as for instance, from a microcomputer. Thus, the disk (15) containing a given sequence of capsules (16) of fragrances, pre-established in tune with the event, movie or show, is adequately inserted into the receptable (3), which is then closed. At the beginning of the event the apparatus is turnen on and then, in synchronism with the sequence of scenes presented and when a determined fragrance is required, the mechanism (13) turns the disk (13), positioning the respective capsule (16) of the required fragrance under the device (17), which, with a vertical movement downwards and upwards, in this order, perforates said capsule (16), thus tearing it open with the pointed element (18). At this moment the scenting substance or composition contained in the capsule (16) falls onto the receptacle (10) and the small fan (11) is immediately driven and sucks air through the small back bores (7), thus creating a current of air in the compartment (8) under the plate (9) and exhaling the respective fragrance through the small front bores (2). In this way, the fragrance is transferred to the room where the event is taking place and spreads out therein creating therein an atmosphere of reality for the spectators. This procedure is repeated by the apparatus, which will select the capsule to be opened at the next scene requiring a specific fragrance.

The duration of the fragrance can be controlled, for instance, by the chemical formulation itself, previously produced for the respective event. The duration of the fragrance can also be controlled by means of odor-inhibiting agents, such as chemical inhibitors, which can be foreseen in the set of capsules (16). Thus, each event will have its disk with the corresponding sequence of capsules of fragrance. However, this does not exclude a random supply of fragrances for a given event.

The driving of the apparatus as a whol , that is to say, the mechanism (13), th puncturing d vice (17) and the

fan (11), is effected by electronic signals, inaudible to the spectators. In the same way, the means which actuate these elements are such as not to produce any sounds or noises strange to the ear during the performance of the event.

The method and apparatus of the present invention can be produced for most diverse situations. Thus, for instance, they can be designed for existing movies, or else program them for synchronization with the sequence of the scenes. Old movies can be reedited with signals for synchonism with the inventive apparatus, or else tapes incorporating signals for synchronism with the apparatus can be made.

The disks produced can be either disposable or returnable to be re-edited. This edition is obviously accomplished by refilling them with respective fragrance capsules referring specifically to the corresponding motion picture.

The apparatus of the present invention is usually small and can be installed, for instance, besides a television set, a video cassete recorder or a microcomputer with CD-ROM. As can be seen from figure 4, several units of the apparatus (1) can be conveniently distributed in large rooms such as movie theaters and, in this case, they will be driven at the same time and will have the same disks. The apparatus of the present invention can even be produced incorporated in television sets, as is the case with the current video cass tte recorders.

CLAIMS

1- A method for scenting rooms in a programmed manner, preferably closed rooms, characterized by comprising a sequence of fragrances which are exhaled in said room, in tune to and synchronization with an event that is being presented, said event being a motion picture, a play, an artistic show and/or a musical, and said sequence of fragrances to be exhaled in the environment being produced by means of a carrier of scenting substances or compositions and being carried out in tune with the beginning of the event and in synchronization with the actions, places and movements that are presented during said event.

2- A method in accordance with claim 1, characterized in that the fragrances are exhaled in sequence specifically following the plot of an event such as a motion picture, a play, an artistic show and/or a musical.

3- A method in accordance with claim 1, characterized in that the scenting substances and compositions used in the method are produced or formulated in accordance with the standards established for this type of product, which will be inhaled by people, and they must be non-toxic, anti-allergic, non-irritant and as inert as possible with respect to the environment.

4- A method in accordance with claim 1, characterized in that the scenting substances and compositions are powdered formulations, granules or liquids, and they must be adequately packed in accordance with their nature.

5- A method in accordance with claim 4, characterized in that the packages are individual and contain defined amounts of scenting substance or composition.

6- A method in accordance with claim 4 or 5, characterized in that said packages are tearable by mechanical action.

7- A method in accordance with anyone of the pr c d- ing claims, charact rized in that said environments are closed rooms such as TV rooms, CD-ROM rooms, movi th aters and

auditoria for shows.

8- An apparatus for carrying out the method defined in anyone of th preceding claims, charact rized by comprising a housing (1), which has at its front portion a plurality of small bores (2), disposed along its whole extension and a plurality of small bores (7) at its back portion, a movable r - ceptacle (3) being disposed above said bores (2), provided with a circular recess (4), which has a hollowed out portion (5), said movable receptable (3) being provided with side guides (6) so that it slides when it is opened and closed, and said housing (1) having inside it a lower (8) and an upper (12) compartment, which are divided by an inclined plate (9) extending from the back portion (9') of said housing (1) to an intermediate portion (9"), forming a channel in said compartment (8) and a housing for a mechanism (13) of the type which fits into the central bore (14) of a disk (15) carrying small capsules (16) of fragrances, said compartment (8) having at its back portion a space where a small fan (11) is installed facing a receptacle (10) located at the front portion of said compartment (8) of the housing (1).

9- An apparatus in accordance with claim 8, characterized in that said mechanism (13) is complemented by a d - vice that moves in the vertical direction (17), provided with a pointed element (18) for puncturing said capsules (16) of fragrances.

10- An apparatus in accordance with claim 8, characterized in that said disk (15) is chargeable with capsules (16).

11- An apparatus in accordance with anyone of claims 8 to 10, characterized in that said rooms are closed spaces such as TV room, video room, CD-ROM roms, movie theaters and auditoria for shows.

FIG. 3

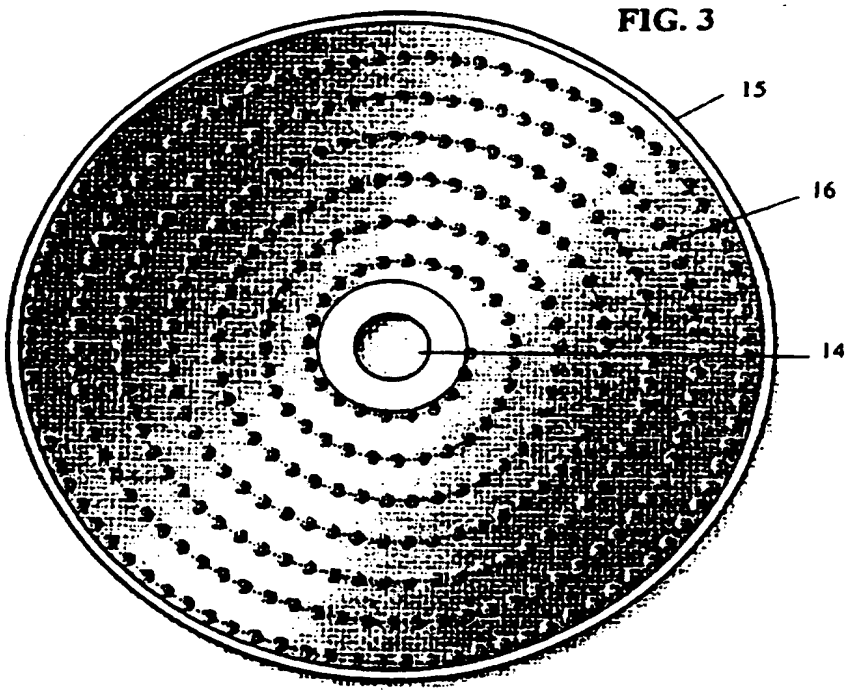
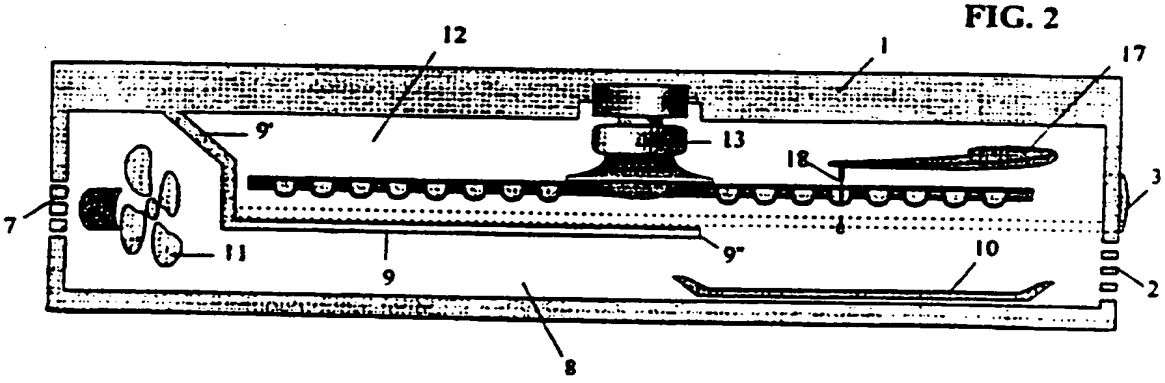


FIG. 2



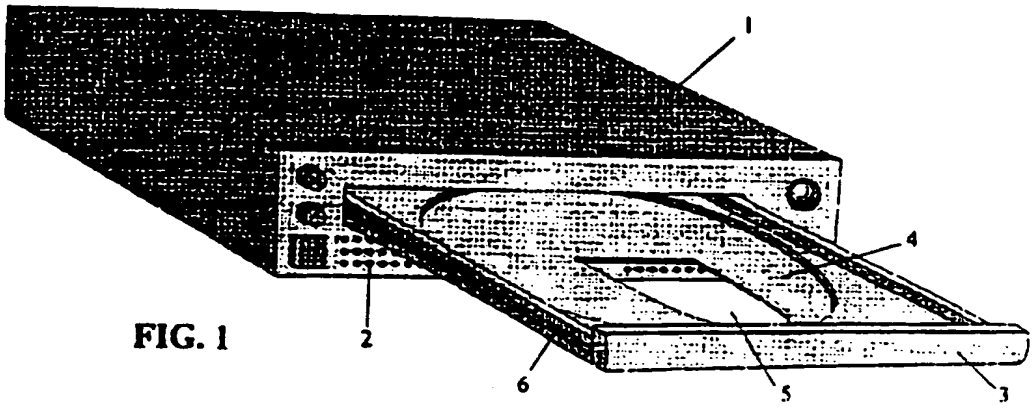


FIG. 1

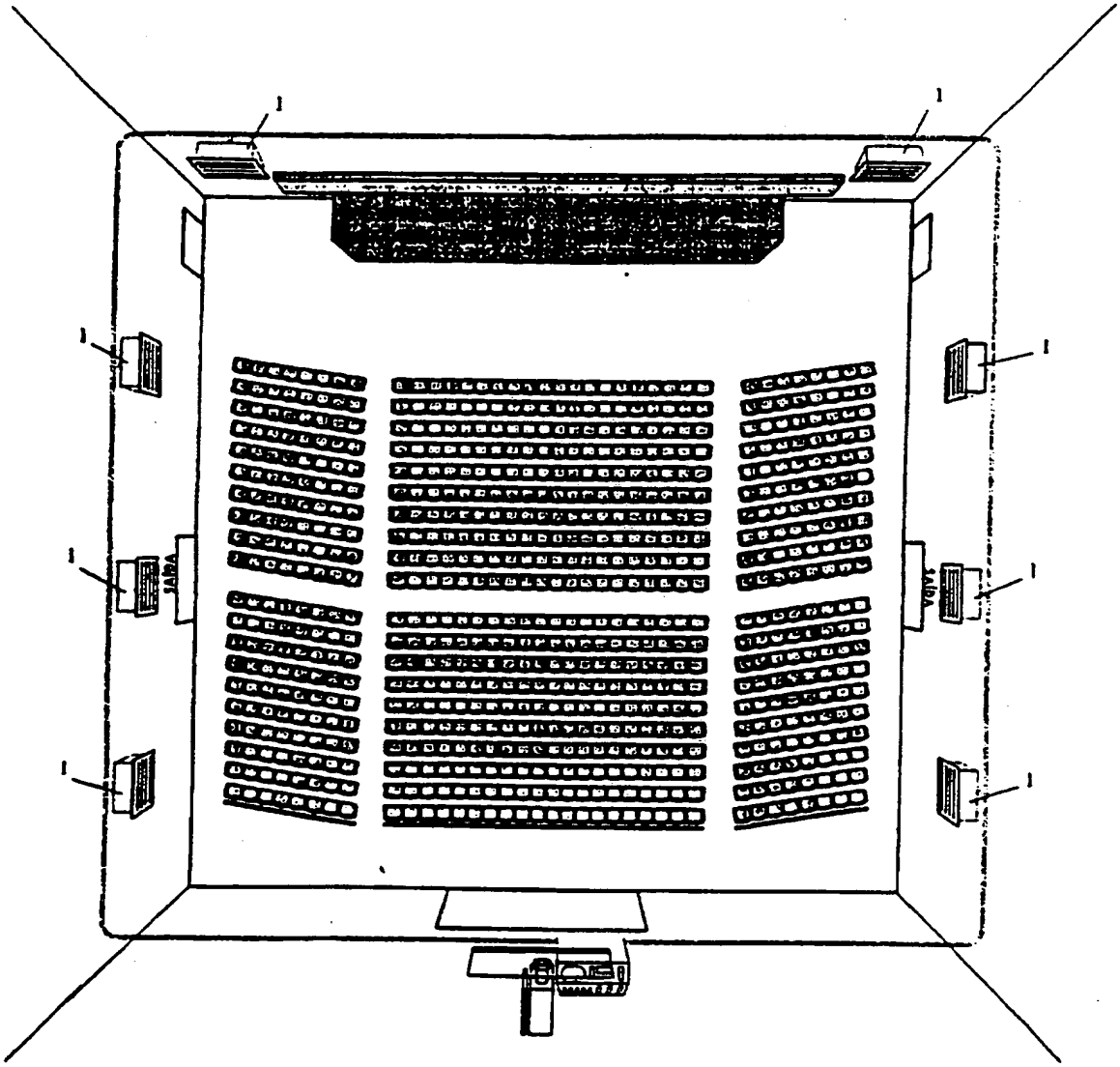


FIG. 4

INTERNATIONAL SEARCH REPORT

Intern al Application No
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A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 A61L9/12

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 6 A61L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 603 030 A (MCCARTHY ROBERT E) 29 July 1986 see claims; figures ---	1-7
X	EP 0 508 939 A (GOMES DOS SANTOS ALCINO) 14 October 1992 see the whole document ---	1-7
X	DATABASE WPI Section PQ, Week 8429 Derwent Publications Ltd., London, GB; Class P34, AN 84-177169 XP002037302 & AU 21442 83 A (WALLACE R W) , 31 May 1984 see abstract --- -/--	1-7

[X] Further documents are listed in the continuation of box C.

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Name and mailing address of the ISA	Authorized officer
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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X	PATENT ABSTRACTS OF JAPAN vol. 017, no. 471 (P-1601), 26 August 1993 & JP 05 109253 A (TOSHIBA CORP), 30 April 1993, see abstract	1-4
X	PATENT ABSTRACTS OF JAPAN vol. 010, no. 197 (E-418), 10 July 1986 & JP 61 041229 A (TAMAPATSUKU KK), 27 February 1986, see abstract	1-3
X	PATENT ABSTRACTS OF JAPAN vol. 016, no. 257 (C-0949), 11 June 1992 & JP 04 058956 A (MATSUSHITA ELECTRIC IND CO LTD), 25 February 1992, see abstract	1-3
P,X	DE 195 13 293 A (T O P TECHNICAL OFFICE FOR COM) 10 October 1996 see claims; figures	1-5
A	US 5 069 876 A (OSHINSKY CANDACE) 3 December 1991 see claims; figures	1-11
A	WO 94 09493 A (TEBBE GEROLD) 28 April 1994 see claims	1-11
A	FR 2 553 666 A (CORREIA GABRIEL) 26 April 1985 cited in the application see claims	1-11
A	DE 40 33 076 A (GRUBER BRUNO) 23 April 1992	

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INTERNATIONAL SEARCH REPORT

Information on patent family members

Intern al Application No
PCT/BR 97/00012

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4603030 A	29-07-86	NONE	
EP 0508939 A	14-10-92	NONE	
DE 19513293 A	10-10-96	NONE	
US 5069876 A	03-12-91	NONE	
WO 9409493 A	28-04-94	DE 4234926 A	11-05-94
		DE 4305141 A	25-08-94
		DE 4313119 A	27-10-94
		AU 5334494 A	09-05-94
		DE 59306470 D	19-06-97
		EP 0664919 A	02-08-95
FR 2553666 A	26-04-85	NONE	
DE 4033076 A	23-04-92	NONE	